

# BIOMECHANICAL SYSTEM DEVELOPMENT OF A RESTRAINT SYSTEM

## ABSTRACT OF THE DISCLOSURE

Disclosed is a safety restraint design controller for controlling the design of a safety restraint system so that a predetermined desired level of an occupant's response (89) is produced. The controller has a database (85) for 5 storing an occupant restraint factor response model (90). The model (90) interrelates at least one predetermined restraint factor (88) with the occupant response (89), the restraint factors having a level that is indicative of setting values for controlling the safety restraint design. A database engine connected to the database (85) determines a level for the occupant response 10 (89) based upon the model and upon a first level of the restraint factors. An optimizer is connected to the database engine for determining a second level of the restraint factors (88), which produces the desired level of the occupant response based upon the desired level of the occupant response (89) from the database engine; whereby the safety restraints design is controlled based 15 upon the determined second level of the restraint factors that produces the desired level of the safety response.